

XXIV.

BACONIANISM AND THE BIBLE.

AN ADDRESS

DELIVERED BEFORE THE

EUMENEAN AND PHILANTHROPIC SOCIETIES

OF

DAVIDSON COLLEGE, N. C.

AUGUST 11, 1852.

BY REV. B. M. PALMER,
OF COLUMBIA, S. C.

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COLUMBIA, S. C.

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## CORRESPONDENCE.

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EUMENEAN HALL, Aug. 12th, 1852.

*Sir* :—The undersigned have been authorized by the Eumenean Society, as a Committee, to express the sincere and unreserved thanks of that Body for your very able and eloquent Address delivered before the two literary Societies of Davidson College.

As expressive of the genuine interest experienced during its delivery, we would say that we feel unwilling that those exhibitions of noble thoughts and high-toned principles should be confined to one Auditory,—we therefore most courteously solicit a *copy* of the Address for publication, in order that an intelligent public may read and admire.

With kind solicitude for your future bliss and prosperity,

We are yours, most respectfully,

R. E. ALLISON,  
J. S. HARRIS,  
D. C. RAMSOUR. } *Committee.*

Rev. B. M. PALMER.

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COLUMBIA, S. C., Aug. 15th, 1852.

*Gentlemen* :—The Address which I had the honor to deliver on the 11th instant, and which you so politely request for publication, is at your disposal. Be pleased to convey to the Eumenean Society my grateful acknowledgment of their kindness: with the best wishes for the prosperity of the Institution to which you belong, as well as for your individual welfare.

I am, gentlemen,

Very truly yours,

B. M. PALMER.

Messrs. R. E. Allison, J. S. Harris, D. C. Ramsour, Committee.

ADDRESS  
TO THE  
EUMENEAN AND PHILANTROPIC SOCIETIES  
OF  
DAVIDSON COLLEGE, N. C.

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BACONIANISM AND THE BIBLE.

We live in an age distinguished by the wide diffusion of scientific knowledge. This results from the independent labours of two distinct classes of minds. Beside the great masters of thought, whose inventive genius gives birth to systems of philosophy, has sprung up a race of interpreters, who translate the mystic Cabala of the learned into the common dialect of mankind. Incapable themselves of educing a single new truth, their humble, but useful office, is to transfuse the great thoughts of others into the popular mind. Without making any substantive addition to real science, they extend its dominion by serving as reporters, and furnishing a larger audience to the true thinkers of our race. Thus, theories and systems, which in former ages were locked up in hieroglyphics, known only to the High Priests of Science, become, through these interpreters, the common property of man. They catch the thoughts of cloistered students, and, like answering cliffs, swell the echo until the reverberation fills the world.

The second class, to whom this dissemination of knowledge must be ascribed, will embrace a nobler order of

minds, whose aim is not to translate great thoughts, but to reproduce them in other forms. They are not engaged in the discovery, but in the application, of truths. They find science occupied with experiment and hypothesis as instruments to establish some theoretic principle; but the principle, when demonstrated, they embody in some practical invention. With a genius intensely active and utilitarian, they seek to realize the abstract in the concrete. They entice science from her recluse meditations, to plunge her into the activities of the working world. They arrest philosophy in her empyrean flight, soaring with transcendental wing to gaze upon the absolute, that she may work practical reforms upon earth. They stand as godfathers to science, giving her, a fair bride, in productive wedlock with hardy labour. It is science which, with labour's rough hand, tunnels our mountains, spans our vallies, fertilizes our fields, reaps our harvests, moves immense structures of wood and stone like figures on a chess board, weaves our clothing, grinds our bread, bores our wells, empties rivers of water into our cities, sketches the human form with a sunbeam, lights our dwellings, propels our vessels, telegraphs our messages, prints our books, suspends bridges in the air, delicate and graceful as though woven with threads of gossamer:—but where shall the breathless catalogue end? So, too, the most abstract principles, thought out by great minds amidst the haze and mist of metaphysical speculation, are wrought into new forms, and combine to new results, when thrown again into the forge of a practical mind. They henceforth construct great systems of education, remodel political constitutions, work reforms in jurisprudence, and searching downwards, effect organic changes in the social condition of mankind. They tone the oracles delivered from a thousand pulpits, and flash out even amidst the raving and cant of the platform. Knowledge, so to speak, is taken in by absorption, as plants derive their colour from the sun. The plough-boy comes into acquaintance with Liebig and agricultural chemistry, as he pulverizes the guano upon his fields; and the sooty engineer will talk, with scientific precision, of the valves and pistons of the bellowing monster which he guides.

Under the united labours of these two classes,—by the free translations of the interpreters on the one hand, and



by the tangible inventions of the mechanicians on the other,—the finest discoveries of science and the nicest theories of philosophy are diffused like the beautiful light of heaven, and the world breathes an atmosphere of knowledge. But there is nothing perfect on earth. This proud result is marred by one incidental evil: the knowledge is shallow in proportion to its diffusion. A brood of sciolists is nurtured, who are perpetually mistaking the first generalizations of science for its ultimate conclusions. Confounding the mere scaffold on which the builder stands for the temple which he is erecting, hypotheses framed only for the purpose of investigation, are assumed as fixed facts; and these are arrayed in deadly conflict with the teachings of Revelation. These smatterers, who have no scope of knowledge to discover the real unity of truth amidst seeming diversities, have raised the senseless clamour which on every side vexes our ears, that scripture is a foe to science—the dogmatic sway of the one crumbling beneath the stealthy advances of the other. Alarmists, too, peal the tocsin throughout the Church, as though vanquished Christianity was about to surrender at discretion to her armed assailant: while scoffers fling back this shameful distrust as itself an impeachment of the scriptures; and boast of stronger faith in the discoveries of philosophy, than Christians feel in the testimony of inspiration.

It is time these schismatics were exposed who thus rend apart the followers of truth. The profound thinkers, who open the sluices of human knowledge, never speak in the flippant tone of these half fledged wittlings. They never regard their first generalizations as final truths, but as successive rounds in the ascending ladder of science—processes for the elimination of mysteries still concealed. They authenticate no conclusions, till the widest induction has been reached, and the last analysis has been made. Nor, on the other hand, do theologians, who have measured the full argument of inspiration, flout or dread the growing discoveries of science. He who gave the Bible built the universe, and His voice must be heard in the utterances of both. If science lifts a theory against the inspired record, they calmly wait till a larger induction shall blend these discords into the melody of truth. Neither philosophers, nor theologians, who are truly such, share in the jealousy

of mere empirics. They can stretch their hands in friendly greeting, however their responses may be drowned in the hoarse clamours of the half taught million. Philosophers know the history of science too well as a long record of conjectures to be verified, and of mistakes to be corrected: a wholesome recollection of which forbids the too positive assertion of hostile theories which may soon require to be vacated. Theologians know Christianity not only as a record, but as a life. For eighteen centuries, she has turned the edge of every sword and blunted the point of every spear, that have rung upon her harness. Even when struck with the leprosy of error, her inherent life has thrown off the hideous scales and "her flesh has come again like the flesh of a little child." What has this invulnerable and immortal system to dread in the encounter with human wisdom?

It should stifle forever the ignorant fears of timid Christians, and the malicious scandals of scientific gossips, that this charge has a thousand times been raised and refuted. When, for example, a hundred years ago, Kennicott and De Rossi began the collation of their 1700 Greek and Hebrew MSS. and spoke of their 800,000 various readings thus detected, the Christian world rose in arms against critical labours which have now settled forever the integrity of the sacred text. The well known blunder of the French savans is equally illustrative, who assigned to the Zodiacs taken from the temples of Dendera and Esneh an antiquity fatal to the scriptural chronology. But Champollion's key revealed the name of Augustus Cæsar in those mystic signs said to have been traced 4000 years before the Christian era; and placed in the reign of Commodus, 180 years after the advent, the temple said to have been built 7000 years before. The time would fail to tell how infallible Popes, with pious fathers of the ancient Church, thundered anathemas against the theory of Antipodes: yet the earth, without heresy, is now a globe. Or, of the solemn council of Salamanca denouncing the geographical hypothesis of the continent which Columbus discovered and we inhabit. Or, of Galileo—whose restless ghost, like that of Banquo, is daily conjured up to scandalize the Church—recanting the system of Copernicus before the inquisitors of Rome. In a word, there is not a province

in the whole circle of human knowledge, in which science has not sometimes tripped, and her progress been challenged through superstitious fears. In metaphysics, astronomy, natural philosophy, political economy, therapeutics, anatomy—on the subjects of witchcraft and spectres, usury and tithes—truth has fought her way against prejudice and calumny: and saucy skeptics, while sapping the Christian faith, have hurled back the innocent anathemas of frightened Churchmen. The past is nevertheless a guarantee for the future. If these strifes have been composed, let us not smile at the spectral apprehensions of our fathers, without learning wisdom from their folly. The harmony now established on these points, affords strong presumption that all moot questions of the present day will find an equally happy adjustment; and that the most contentious of our geologists, ethnographers and chronologers, will clasp in orthodox embrace our doctors of theology.

These preliminary observations open a pathway into the present discourse. This alleged opposition of science and revelation, I wish to confront with one great historical fact: *that the only philosophy which has given to the world a true physical and intellectual science, is itself the product of Protestant Christianity.* This fact, if established, concludes debate. It will then matter little that philosophers, in the enthusiasm of early discoveries, have sometimes swept beyond their premises. It will matter little that preconceived and cherished opinions have been slowly surrendered, and sometimes obstinately defended against advancing science. It will matter little that sophists have often seized the inquiries and conjectures of science as levers to overturn revealed religion. If in the scriptures we find the genesis of that philosophy which gives the world its only true science, there can be no antagonism in the case. It will devolve upon me, therefore, to show the radical deficiency of the science and psychology possessed by the ancients, until the inductive method was fully expounded by Sir Francis Bacon; and then to show the historical and logical connexion between his philosophy and the Christian scriptures.

Let us, for this purpose, place ourselves at the two periods described by Whewell as “the first waking of science, and its mid-day slumber;” and examine the Greek philos-



ophy before the Christian epoch, and that of the schoolmen in the middle ages.

It is impossible to contemplate the intellectual achievements of the ancient Greeks, without intense admiration of their genius—a genius imparting sanctity even to their errors, which we ascribe to the irregular working of mighty intellects, evincing singular acuteness, invention and logical scope. In some departments, particularly the æsthetic, this genius has embalmed itself in models, which it has been the highest ambition of modern art to re-produce. The *Iliad* of Homer, the *Philippics* of Demosthenes, the *Odes* of Anacreon, the *Lyrics* of Pindar, the *Dialogues* of Plato, the *Tragedies* of Sophocles, the *Ethics* of Aristotle—what are these but classical urns from which is still drawn the literature of the world? The vestal flame which these early priests kindled on the altar of human thought, burns with a brightness which even the choke-damp of the world's millennial night of ignorance and barbarism did not extinguish; and is not obscured by the brilliant Drummond light of our recent civilization. In painting, the names of Zeuxis and Apelles, of Parrhasius, Aristides and Euphranor, will ever be associated with the more recent names of Raphael and Michael Angelo, of Titian, Correggio and Rubens. In sculpture, the Greek model is confessedly unsurpassed. None have yet eclipsed the fame of Phidias, Praxiteles, Lysippus and Polydorus;—and the statues of Minerva and Venus de Medici, the group of Laocoon, and the Apollo Belvedere, still provoke to envy the genius of the Italian school. In architecture, while the immense structures of Babylon and Persia convey the impressions of vastness and strength, and a gloomy grandeur reigns throughout the vast piles of Gothic Europe; yet to this day must we borrow from Greece the beau idéal of architectural beauty and grace still to be discovered in the ruins of the Parthenon. As the mathematician who applied geometrical measurement to the famous dome of St. Peters, and discovered the curve of greatest beauty to be also the curve of greatest resistance, so we are struck with this instinct of genius which has drawn, with mathematical precision, these proportions of exquisite grace.

“Science in his secret laws hath found out latent beauty,  
Sphere and square, and cone, and curve are fashioned by her rules.”



But perhaps the proudest and most permanent monuments of the inventive genius of the Greeks lie in the department of mathematics and in the science of astronomy. As to the latter, advances were made which excite astonishment, either that they were made at all, or that they should have stopped short of the results attained in modern times. The names of Meton, Aristarchus and Hipparchus, are identified with the calculation of eclipses, the grouping of constellations, the cataloguing of stars; with discoveries of the obliquity of the ecliptic, the length of the solar year, the lunar cycle, the precession of the equinoxes, and, as some allege, of the sphericity of the earth, and its annual revolution about the sun. In geometry, we find the name of Pythagoras associated with one of its most beautiful and fundamental problems; while the elements of Euclid have not yet been superseded as a text book in the present advancement of mathematical science. To the Platonic school we owe the geometrical analysis and conic sections—and Archimedes, who has been beautifully styled the Newton of antiquity, passing over his discoveries in mechanics, and his quadrature of the parabola, directed a sphere and a cylinder to be placed over his tomb—resting upon the discovery of their relations his highest title to posthumous fame. These imperishable names shine with the lustre of fixed stars, amidst clusters of others of sufficient magnitude to be revealed by the telescope of history. We pay this cheerful and earnest tribute to the knowledge of the ancients, that it may not seem to be a narrow and envious spirit which prompts the denial that they possessed any *science*, in the comprehensive significance of this term. Says Professor Playfair:\*

“One ought to listen with caution to the encomiums sometimes bestowed upon the philosophy of those early ages. If these encomiums respected only the talents, the genius, the taste of the great masters of antiquity, we would subscribe to them without any apprehension of going beyond the truth. But if they extend to the methods of philosophizing, and the discoveries actually made, we must be excused for entering our dissent, and exchanging the language of panegyric for that of apology.”

Many of their alleged discoveries were fortunate conjec-

\* Preliminary Dissertation.

tures, which have since been verified : for in science, the just maxim must hold, that nothing is discovered which is not proved. When, for example, Empedocles taught that the moon shines by light borrowed from the sun ; and when Democritus taught that the spots on her face arose from inequalities upon her surface ; a random guess certainly hit the truth in the eye, but it was not shot with an aim. When Aristarchus is supposed to have taught the spherical form of the earth and its diurnal and annual revolutions, if this rested upon demonstrative proof and formed a part of the *knowledge* of mankind, it is strange that for two thousand years it should have been displaced by the Ptolemaic theory that the earth is a flat and immovable disc. What if this vaunted discovery should be only a lucky hypothesis, framed upon the Pythagorean tenet that fire—of which the sun was considered a solid ball—holds the central place in the universe !\*

But what is science in its broadest import ? Surely it is not the mere stylus, which records phenomena as they are observed—for the more obvious motions and combinations of the heavenly bodies attracted the attention of early Chaldean shepherds, as they do now that of the ignorant sailor, who never dreamed of a science. Nor can it be the simple classification of facts : for this marshalling of kindred phenomena into their proper ranks, while it is the first step of the inductive philosophy, of itself yields no results. The dignity of science is not reached until after these successive steps, the great laws have been evolved in accordance with which the whole machinery of nature is regulated. It is when the various processes of observation and arrangement, of hypothesis and experiment, of induction and generalization, have been successfully gone through ; and when the secret powers, both near and remote, which underlie the outward and tangible, have been detected, that science, in robes of majesty, ascends the throne she may never abdicate. The Greek philosophy was entirely barren of fruits like these. In its whole course, no universal and pervading laws were proclaimed,† such

\* Encyclopædia Americana. Art. Astronomy.

† "Of such an examination [of facts] neither Aristotle, nor any other of the ancients, ever conceived the necessity ; and hence these laws [of motion] remained quite unknown, throughout all antiquity."—*Prof. Playfair's Prel. Dissertation.*

as those which have immortalized the names of Kepler and of Newton. It had therefore no key to unlock the cabinet in which Nature treasures her mysteries, and the baffled curiosity of mankind laboured vainly in the search of her undiscovered secrets.

It is a singular fact, to which attention must now be drawn, that the Greeks, whose genius peopled the world of the ideal with the most beautiful creations, and whose keen reason pushed so far the application of pure mathematics, should have so signally stumbled over the very threshold of physical science. In support of this charge, it will not be necessary to collate single instances in which natural philosophy seemed almost to be the object of burlesque. As, for example, that the stars arise from vapours which are ignited in darkness and extinguished by day—that the sun consists of fiery particles collected by humid exhalations—and that the phenomena of electricity are due to an inherent soul or essence, which, awakened by friction, comes forth from the amber, and seizes the floating atoms around it. It will be far more impartial and just to draw our judgments from the systems of the great masters. Let any one then take into his hands the physical treatises of Aristotle, and deliver, if he can, a favourable verdict upon the natural science of antiquity. This arch-philosopher, whose breadth of mind enabled him, like Sir Francis Bacon, to present in his works a complete panorama of the entire learning of his day, unlike Bacon, gave no clue by which his vast apparatus of knowledge could be turned to account. What must we think of a physical philosopher who talks to us of a first matter, without quality or quantity, or any of the properties of body,\* on which forms may be impressed? Who invents a secret principle, concealed under the indeterminate appellation of Nature, for the purpose of uniting matter and form together, and which shall be the internal cause of all motion and arrangement? Who teaches that heavy and light are not relative, but absolute terms; descriptive of original properties, by which fire and

\*“Though we can suppose body divested of any one particular figure, and of every sensible quality, such as colour, odour, taste, &c. and the *substratum* or *basis* or *matter* of it, still to remain; yet it seems impossible to conceive it divested of *solidity* without supposing it totally annihilated.”—*Ency. Brit. art. Metaphysics.*



air have their natural motions upward, and water and earth have their natural motions downward? Who, to explain circular motion differing from either, makes it peculiar to heavenly bodies, which are thus separated by a wide interval from bodies terrestrial? Who argues against a vacuum, that in it there is neither up nor down, and thus no scope for the natural motions of bodies? Who defines motion in such unmeaning generalities as these, "the act of a being in power, as far as in power," and defines light "the act of a transparent body in as much as it is transparent"—and who proves by syllogism the incorruptibility of the heavens, because celestial motions are circular and have no contraries? If we pass from the Peripatetics to the Old Academy, what are we to think of the ideas of Plato, eternal and self-subsisting, forming a world of archetypes, the only subjects of which truths and definitions can be predicated? Plato has been styled "the Homer of Philosophers;" but that great poet never indulged a wilder rhapsody, if this doctrine of eternal exemplars answering to outward phenomena is presented for physical philosophy. It may come under the broad charter of poetic license, but not of scientific explanation, to say that things are respectively beautiful or great or cold or hot, according as they partake of the abstract ideas of beauty or greatness, of cold or heat. If we pass still to the Italic school, what natural science is to be decyphered from the mystical numbers of Pythagoras? In what sense these were the principles of things, except as they were mere *symbols* of these, it is perhaps impossible to understand. Yet the frenzy of this scientific dream will be forgiven, for the sublime poetry of that conception to which it gave rise, the music of the spheres.

Let it not be alleged that this miscarriage in physical science was accidental. How should it then have been the opprobrium of all the schools alike? and how should the seven sages, who presided over the inauguration of Grecian philosophy, have come nearest the truth, and science retrograde in the hands of their successors? The great vice of their physical science was the unchastened use of the speculative faculty. Not content with the relative knowledge of properties and qualities and the fundamental laws under which these are developed, they indulged the

presumptuous hope of penetrating, by one transcendental effort of thought, into the essence of matter. Unmindful of "the great object of Natural Philosophy, which is to ascertain the conjunction of events," they set off upon the Quixotic attempt "to discover the efficient causes of these events, and by synthetical reasoning to deduce, as necessary consequences from their supposed causes, the phenomena and laws of Nature."\* The adoption of the *a priori* method of investigation was thus necessitated, which shortly interposed a barrier against all progress in knowledge. As soon as philosophy became systematized, the effort was to arrange into distinct categories the most general and abstract conceptions, such as space and time, number and motion; and then by logic to predicate of all the individuals grouped under a class, whatever may be affirmed of the class itself. Thus were the philosophers of antiquity walking forever the dull round of the syllogism, making few discoveries, and scarcely enlarging the horizon of human knowledge. For, as in the syllogism, the conclusion is always embraced in the major premiss, we do not by it discover a new truth, but only develop what is already known into a more particular form. It was thus true of them, as Whewell remarks, that "they did not collect clear fundamental ideas from the world of things by *inductive* acts of thought, but only derived results by *deduction* from one or other of their familiar conceptions."† The inevitable result of which was a laborious trifling with words of equivocal import, and overwhelming the facts of science with petty and barren speculations: and the philosophers, to use the biting language of Lord Bacon, "flew off from particular objects to the greatest generalities, as the axes around which their disputes may revolve."

This *a priori* investigation, which so utterly failed to give the countersign affording entrance into the sanctuaries of Nature, was, however, precisely adapted to the mathematical sciences. In these, a few axioms, intuitively perceived, afford the data from which the mind develops link after link of the most lengthy and intricate demonstrations. Hence we need not be surprised at the brilliant results attained by the Greeks in these departments, as compared

\* Stewart's *El. of the Human Mind*, ch. 4, sec. 1.

† *Hist. Inductive Sciences*, vol. 1, p. 39.

with the poverty of their physical researches. Their success in the one, and their failure in the other, receive the same explanation. It is a remarkable confirmation of this, that the branch of physics in which they made the most advance was that of mechanics; and in that portion of it, the equilibrium of forces, which admits of being treated by a priori reasoning; and that by this process alone, without a single experiment, Archimedes framed his ingenious demonstrations of the lever and the centre of gravity.\*

The transition is easy from the physics to the metaphysics of the ancient Greeks, since the same method of inquiry was pursued in both, and with like results. If a single illustration of the haze which hung around their psychology be sufficient, simply ponder the various definitions of the human soul enumerated by Cicero in his Tusculan questions. One thinks it to be the heart; another, the blood diffused through the heart—one regards it as a certain part of the brain; another, as the vital principle itself—one, more dreamy than the rest, defines it the harmony arising from the tension of the body, as of a stringed instrument—Pythagoras identifies it with his perfect number, 4—Plato treats it as an emanation of the deity, through the soul of the world, which animates and pervades all things—Aristotle blunders into greater vagueness still, and derives it from a “quinta essentia,” a new element for which he invents a name that cannot be translated,—*Entelechy*,—combining the conceptions of perfection and activity. What a labyrinth is here! Not, however, to take a snap judgment from such a motley assemblage of crude opinions, let us turn to the digested systems of some one of the acknowledged masters. Plato, who, in speculative philosophy, takes precedence of all the rest, held that those ideas, which are the archetypes of things sensible and material, exist in the mind as its original furniture, and form the source of all our knowledge. The various objects in nature recognised by the senses, suggest the reminiscence of those primitive cognitions enjoyed by the soul in a pre-existent state. With this starting point in his psychology, the only possible method of inquiry was the *deductive*; precisely that adopted in physics to so little advantage. All philosophy, as all science,

\* Prof. Playfair's Prelim. Dis. Ency. Brit.



was built upon these original ideas, by a process of reasoning developing them in various particulars. As in physics, men ceased to inquire about properties in the presumptuous hope to compass the knowledge of essence; so in metaphysics, the search was after abstract being and the whole science of ontology,\* to the neglect and disparagement of the facts of their inward consciousness. How opposed this psychology and its method of inquiry are to that productive philosophy which has been advocated by the English and Scotch metaphysicians, it is almost superfluous to remark. Bacon taught the true method of inquiry in all science to be inductive, the reverse of that a priori method pursued by the ancients. This mighty Reformer called men off from transcendental inquiries to observe and to classify facts; to ascend carefully through more comprehensive generalizations, till the most general axioms are arrived at. Locke, following in the avenue thus opened, taught that the origin of all our knowledge is found in experience. Just as observation collects the materials of natural science, so consciousness presents the facts of experience as the data of mental science; and thus the great inductive principle is boldly applied in developing the laws of mind as well as of matter—which, like Ariadne's clue, guides us through the labyrinth of opinion and wild conjecture into the remunerative science and philosophy of our times.

But if these barren results alone repay our gloomy search into the ancient systems which at least were fresh with the dew of original thought, what must we expect from the middle ages, when philosophy in her dotage drivels in all the absurdities of the schoolmen? During the long interval between Archimedes and Galileo, no solid contribution was made to science. Mind, though sufficiently active, was occupied with studies so utterly trivial as to exhaust it of productive power. "Science had become a mixture of art and mysticism," and clowns travestied what once philosophers discoursed. Uncouth caricatures took the place of nature, and men worshipped the grotesque instead of the true. Astronomy no longer numbered the stars, or

\*A striking parallel to this may be seen in the German Metaphysics, where the same vicious method of investigation has terminated in similar disasters.

marked the courses of the planets; but astrology calculated horoscopes and measured the stellar effluxes which control human destiny. Chemistry, with its crucibles and solvents, sought not to detect the secret affinities of matter; but Alchemy laboured to transubstantiate its properties and accidents. While magic, maintaining a supernatural causation where only it should have discovered a physical connection, converted nature herself into a juggler, and science into legerdemain. In metaphysical reasoning, all calm and patient thought was drowned in the dim and clatter of dialectic wrangling. The barbarous scholastic jargon stuns the ear, and the brain whirls in the struggle to recognise as entities what before were only abstract conceptions. Substantial forms and essences, quantities and qualities and quiddities, formalities, realities, and individualities, dance in fantastic motion before the mind, like sprites and fairies in a mid-summer's night dream. How many angels can dance together on the point of a needle, what is the gradation of rank in their hierarchy, what their employments and medium of conversation, what are their morning and evening states of understanding—"subtle, vermiculate questions" truly, as Lord Bacon sharply terms them, "which have indeed a kind of quickness and life of spirit, but no soundness of matter or goodness of quality." Such was the scholastic philosophy of the middle ages, when "angelical doctors" kept up for generations the game of battledoor; and Thomists and Scotists watched the long night through with quirks and riddles equal to those of the Egyptian sphinx.

Compare now with these chaffy speculations the extension and rich discoveries of modern science. It is needless to enumerate them, for they lie all around us, and are in contact with the humblest minds:—blessings not within the monopoly of wealth, but freely dispensed to the poor, whose comforts they increase, and the labourer, whose toils they abridge. As one has described it, it is "the philosophy of utility, the philosophy of lightning rods, of steam engines, safety lamps, spinning jennies, and cotton gins—the philosophy which has clothed the naked, fed the hungry, and healed the sick—the philosophy of peace, which is converting the sword into the pruning hook, and

the spear into the ploughshare.”\* It is a philosophy which, while applying her principles to useful and practical ends, does not pause in the career of investigation and discovery. With relentless purpose, she still pursues Nature through all her departments; who cannot retreat into deeper mysteries without yielding her discovered secrets to this relentless interrogation. Astronomy, with her telescopic eye, pierces further into that unmeasured space in which planets sweep: and Geology digs up from the deep foundations of the earth the rocky records of extinct races, carrying us through vast cycles of years nearer to the moment when the great clock of the universe ticked its first note of time. This “philosophy of utility” walks henceforth upon the two equal legs of *discovery* and *application*. While perfecting her researches, discovering by stricter analysis the original elements of matter, and unfolding the laws of their combination, she at the same time reduces every new fact to practical use. At the very moment she is discussing the nature of electricity, and testing, if possible, its identity with heat and magnetism, she is also stretching the telegraphic wires over mountain peaks and under the ocean’s bed, converting the world into one great whispering gallery—where distant nations over continents and seas exchange thoughts of the passing hour. Catching the spirit of romantic adventure, she seeks new regions for her conquests. Having subdued the land and the wave, she revives the fable of Dædalus, and seeks to steer her flight above the clouds. She laughs at impossibilities; and even in moments of discomfiture, holds up her past success in rebuke of the stubborn skepticism which predicts her failure. We listen with amiable credulity even to sciences which, from their manner of prosecution, bear all the marks of bastardy. “A man cannot tell what shall be”—a falling apple suggested the great law of gravitation; and we smile upon the lofty pretensions of phrenology and mesmerism, not knowing what lucky accident may spring a hidden mine of truth, and lead to “things in heaven and earth which our philosophy hath not dreamed of.”

It is not my purpose to inquire into the causes of difference between the garrulous and disputatious philosophy of

\* Tyler’s Discourse on Baconian Philosophy.



antiquity and the practical and remunerative science of our day. It would be sheer empiricism to assign the change to any single cause; and to search for all the influences which have occasioned it, would be to write the history of modern civilization. But I wish you to note the historical line of separation between the two. Until the moment when Sir Francis Bacon expounded the inductive method of inquiry, and exposed the baldness of all a priori researches into nature, there was no comprehensive science in the world. For two thousand years, the great problems of physical and mental science went unresolved. Men stood rooted, like statues, to the earth "their nerves all chained up in alabaster," or else, bound up in the fetters of a stony logic and balancing in the endless seesaw of the syllogism. But in the 17th century arose the great intellectual Reformer, who, snatching the wand from the hands of the Stagyrte,

"With his rod reversed

And backward mutters of dis severing power,"

freed science forever from the enchantments of the wizard.

The date of this new and practical philosophy reads a lesson to those who shamelessly represent scripture and science as irreconcilably at feud. What says history to this? Why, that up to the Christian epoch, and before the revelation of God was either completed or made the inheritance of mankind, philosophy lay in swaddling clothes, rocking and sleeping in her cradle—that while Christianity was struggling for life against the rage of persecution, and shaking the pillars of heathenism, the Platonists and Aristotelians came, like the Philistines of old, and put out her eyes and paralyzed her strength, and then science slept on and had deeper dreams:—that during the dark ages, when the Bible was banished into convents and only read there at the end of a rusty chain, philosophy in her slumber raved as one troubled with the nightmare and cannot awake—that at length God, in compassion for man's blindness and misery, sent Wiclif, and Huss, and Jerome, as forerunners of one greater that should come after: and again he sent Copernicus, and Galileo, and Tycho Brahe, as heralds of another style of monarch—that when Luther entered the pantheon of popery, and shattered the idols of the Church, just one century later another Iconoclast arose

who smote the "idols of the tribe," and of "the den," of "the market" and of "the theatre," in the temple of science—and that Tindal's translation of the English Bible preceded by nearly one hundred years the publication of the *Novum Organon*. What does history say more? Why, that up to this hour there is no country unenlightened by the Bible, whose darkness is penetrated by the rays of science—that there is no land in which the suppression or corruption of the scriptures does not prove, in an equal degree, the suppression or corruption of philosophy—and that where genius has been most sanctified by its contact with divine truth, has science found her noblest votaries, and gained her proudest laurels. A recent writer\* has quaintly enough affirmed that coal is a Protestant formation, since by a singular providential distribution, this mighty agent of civilization and element of political wealth, is possessed almost exclusively by the Christian and Protestant nations of the earth. It might profit some of our dilettanti philosophers gravely to consider what it is that has bound Biblical Christianity and the inductive philosophy and Anglo-Saxonism together for the past two hundred years—and whether it is this conjunction of the Bible and Science that has put this race, like ancient Judah, in the leadership of modern nations. At any rate, let this authenticated fact, that the Bible, throughout all history, has been the *precursor* of genuine philosophy, decree the just doom of him who still persists that they are foes.

These rapid and suggestive touches are sufficient to trace out the historical connexion between the Baconian philosophy and Christianity, as agencies intended by God for the elevation of mankind. That there is also a natural affinity between the two, we might safely infer from their constant conjunction. But it will not be difficult to show why this philosophy should be the philosophy of Protestantism; and I enter upon this final track of thought the more readily, inasmuch as it will afford the more abundant illustration, that Revelation, so far from being inimical to science, contributes a powerful incidental influence in its favour.

1. The Theologian and the Inductive Philosopher proceed on similar principles in the construction of their re-

\* Read's "God in History," p. 49.

spective systems. The materials of science lie scattered in the utmost disorder through the broad fields of Nature—here a rose and there a star. The business of the philosopher is to collect these, as a printer would his types, and put them together on an intelligible page. As he ascends in his generalizations, phenomena the most unlike are grouped in the same class; mere outward analogies are disregarded, and secret affinities are detected, until at length he reaches formulas expressing the great principles upon which nature acts. The key to the cypher once found, nature comes to be read like a great folio; on every leaf a new science, and its various chapters unfolding the history of Providence.

The materials of theology indeed are not gathered precisely in the same way by observation and experiment, but are given immediately by Revelation. Nevertheless, the revelation is not made in a logical and systematic form, but in the most fragmentary and undigested manner. Its doctrines are strewn in magnificent profusion through the histories, narratives, poems, epistles, predictions of the Bible—given sometimes in the form of ethical precepts, and sometimes in the more elaborate form of logical argument. The same patience, and diligence, and caution are required in ranging up and down the Record, as in surveying Nature: the theologian collates his passages as the philosopher collects his facts, and by analogy constructs his divinity as the latter builds up his science. The *a priori* method which we have seen so signally failed to open the mysteries of nature to the ancient Greeks, has wrought equally disastrous results when applied to the interpretation of scripture. Theology, no less than philosophy, rejects the doctrine of innate ideas: and revelation affords the materials of knowledge in the one, as observation does in the other. In both alike, man is but an interpreter, to decypher the record, and to read out the lessons of truth, syllable by syllable. It is perhaps through this similarity of research that some of the most successful prosecutors of physical science have been accomplished divines, who have turned from the written oracles to interrogate the dumb oracles of nature. The training they have received in the one school has disciplined them for large success in the other—and many of the ablest works in defence of



Christianity and its records,—as for instance, the Bridgewater Treatises, the *Horæ Paulinæ*\* of Paley, and the famous analogy of Bishop Butler,—breathe throughout the spirit of the Baconian philosophy, and are framed most obviously upon the inductive method.

2. A second feature of resemblance, or point of contact, between the two, is the faith which lies at the foundation of both. The Bible reveals the existence of God, but who can know the Almighty unto perfection? It speaks of a future and unknown world, for the glories of which thousands of our race are daily rejecting the world of sense in which they live. It partially unfolds many mysteries, which are never compassed by the understanding, yet distinctly received as articles of belief. But why insist on a point so familiar! The Bible everywhere inculcates faith, while it rebukes credulity: two things which sciolists confound, but which are wide apart as the poles. Credulity believes without evidence; faith receives only upon evidence. It demands a testimony which it remits to the most searching scrutiny of impartial and enlightened reason; and then it receives as fact what perhaps may never be compassed as knowledge. But does not faith lie as truly at the foundation of science? The first great injunction of the Inductive Philosophy is faith in well authenticated facts. As reason examines the evidences of a revelation that faith may rest upon a divine testimony, so sense scrutinizes the phenomena of Nature that philosophy may have her facts. These facts, however inexplicable, are received upon their own evidence: and upon this faith, science proceeds to classify them, and finally to eliminate the powers by which they were produced. Thus faith in what is unknown, yet fully attested, is the necessary antecedent of all scientific research and philosophical analysis. This conviction of mind arising from testimony, and this resting belief so exclusively upon facts, call largely both in the philosopher and the divine for the exercise of private judgment; and made Bacon a protestant against the infallibility of the Schools, as they before made Luther a protestant against the infallibility of

\*“It is throughout a tracing of the thousand fibres by which a long series of events connects itself with the warp and woof of human affairs.”—*Taylor's Spiritual Christianity*, p. 31.

Popes and Councils. Just in so far then as the Bible, with its impenetrable but authenticated mysteries, nourishes the principle of faith, does it beget and strengthen the true philosophic spirit. Lord Bacon never uttered a truer aphorism than when he said, "a little philosophy inclineth man's mind to atheism, but depth in philosophy bringeth man's mind about to religion;" and Newton, the brightest English name on the scroll of physical science, is himself a beautiful example of that faith in philosophy which points a true index to faith in God. In the language of another too elegant for me to suppress, "after Newton had stepped from the golden ladder of geometry upon the remotest star, and looked down from that summit of science, in the spirit of philosophy he directed his eye still upwards, and saw the heights of inductive science towering still far above him, and stretching on to the throne of an intelligent Creator; and then with the same confidence in which he had written the other great truths of nature, he penned his general scholium, declaring there is a God, and made it the sublime conclusion of his immortal labours."\*

3. A third particular in which the Bible exerts its influence upon philosophy, is by stirring the human intellect, and preserving it from relapsing into apathy. There are obviously two conditions to be fulfilled in all search after knowledge; these must be first the *object*, and then the *organ*, of inquiry. As in optics, there must be the material universe, and the open eye; so in philosophy there must be the objective truth and the awakened intellect. If the latter be wanting, there may be truth, but there cannot be knowledge. Now the mind can never stagnate in countries where the Bible lifts up its strong and solemn voice. It announces truths of the first interest to man. It tells of God, what His glories and perfections are—of the creative power by which He brought all things into being, and of the providential care with which he sustains them. It teaches man what he himself is, partly matter, and partly spirit—explains the mysteries of his earthly lot, what is the source of all his blessings, and the spring of all his sorrows. It speaks of law and accountability, of sin and

\* Tyler's Discourse on Baconian Philosophy, pp. 326-7.

redemption, of atonement and pardon, of holiness and bliss. It throws a gleam of light into the shadowy land of death, and reveals another state of existence, with its solemn conditions. It enumerates all the relations of human society, and prescribes the duties of each. These topics, moreover, are such as must command the attention of men. There is a congeniality between them and our religious nature, by which they must be received and retained, as the materials both of worship and of thought. From this congruity between our religious consciousness and the spiritual truths taught in the Bible, the latter cannot but arouse the intellect even from its deepest slumbers. Like the silver trumpet hanging against the wall in fairy tale, at whose first blast the disenchanted horsemen leaped upon their steeds, the Bible, as the voice of God, breaks the spell upon the human soul, awakens its religious element, and calls forth a response as certain as the echo of the hills.

As the scriptures have power to awaken the sluggish intellect, so they can retain their ascendancy, preventing all relapse into apathy. The truth which they reveal is that which takes possession of all the powers of the soul, and reigns with equal supremacy in each. It gives exercise to the understanding, controls the affections, and subdues the will; thus subjugating all the faculties of thought, feeling and action. Of this omnipotent truth the Bible is the repository: shall one be brought within the circuit of this voltaic pile, and the repose of every muscle and fibre not be disturbed by the passage of the electric current? Apart, too, from this galvanic energy of truth, there is a seductive charm in the reserve with which the mysteries of the Bible are partially unfolded; which, while it gratifies inquiry by knowledge, at the same time stimulates research by curiosity. A ray of revelation lights up the edge of some unsearchable mystery, which, like the fringe of gold that the setting sun places on the border of a sombre cloud, kindles the imagination to paint the glories hid within its dark ground. Thus incidentally does the Bible lend aid to philosophy, by sharpening the instrument with which all her researches are to be prosecuted.

4. A fourth advantage accrues to philosophy from the complete information afforded on all moral subjects, by which the mind is released to pursue the studies of science.



No one can peruse the speculative writings of the ancients without perceiving how these were intermixed with their theological inquiries. What God is—whether a distinct person having intelligence and will, or simply the *anima mundi* informing and actuating nature—what precise relation he sustains to the universe, and in what way his power acts upon it—whether matter be eternal, and what are its constituent elements—what the human soul is, whether a spark emitted from the divine essence, or only matter in its most ethereal form—whether it be immortal, and how it survives the shock of death—whether in the world of spirits it will have an individual subsistence as on earth, or be re-absorbed into the substance of deity—whether a judgment shall be rendered upon human actions, and what shall be the recompense of transgression: these and kindred inquiries were the absorbing themes upon which the speculative genius of antiquity wasted its strength. From what has before been said of man's religious constitution, it will appear, that until they were answered, all other subjects must be kept largely in abeyance. Yet without a special revelation, what data exist from which the solution of these problems may be drawn? Hence the ancients tilled on, weaving their cosmogonies with infinite labour, which, like Penelope's web, were doomed to be as laboriously unravelled. Upon these subjects, however, the Bible pronounces with all the authority of God. A divine testimony reduces conjecture into knowledge, and opinion into faith. The mind is released from the torture of doubt, as well as from the agony of unbelief: with its systems of theology and morality constructed, it can turn to reap the knowledge which may be gathered from the fields of science. The soul's yearning after its Creator once satisfied, and its longing to know itself fully met, it is disengaged from studies in which, untaught, it could never come to certainty, and is sent forth to interrogate nature and gather her responses from a thousand oracles.

5. Revelation does not confine itself to these indirect methods of benefiting science. It reveals the uniform laws of God's moral government, and thereby hints to science her true province, that of tracing and expounding the fundamental laws of the physical universe. It was something

gained to truth, when God and Nature came to be viewed apart—when the world ceased to be considered as the outward garment of the deity, and God as only the animating soul of nature. It was the first great lesson taught in science, not less than in religion, when God stood forth to human thought as the great Creator in whom all beings live and move. But when through all his works a glorious unity of design was perceived, and the sublime idea of a law was framed, expressing the uniformity of the divine operations, then was discovered the great secret of philosophy, the first suggestive hint of science.

“A slight suggestive nod to guide the watching mind,  
A half seen hand upon the wall, pointing to the balance of comparison.”

If there be one idea, more absolutely a reigning idea, in the scriptures, it is that of *LAW*—law written upon man's heart, defining his moral relations—law, whose transgression placed him under the dominion of guilt and death—law, whose demands, inflexible, because just, cannot be relaxed, but requiring, in the sinner's salvation, all that is involved in the terms atonement and sacrifice. Like the higher generalizations of the inductive philosophy, the Bible extends the empire of law, until its jurisdiction shall embrace angels in their unspotted holiness, and devils in their guilt and despair.

Now this conception of law, embodying the will and operations of one supreme and intelligent being, is the germ of all true science. It rectifies the blunder of the ancient sages, who could not successfully disentangle the Deity from Nature; and confines philosophy to the interpretation of the physical laws by which the universe is directed. As one infinite, designing and governing mind presides over all the phenomena of nature, there must be perfect harmony in all her parts. The philosopher having confidence in the certainty of these connexions, and in the energizing power of God, argues boldly from effect to cause. The golden thread which conducts him through all the mazes of physical research, is

“The wonderful, all prevalent analogy that testifieth one Creator,  
The broad arrow of the great king, carved on all the stores of his arsenal.”

6. But the Bible contains within itself the highest philosophy. Its subject is man, in the full exercise of all his

powers, and exhibited in all the relations which he can sustain. It does not, like philosophy, give us the mere anatomy of human nature, dissecting its parts, and technically describing their several functions. But it clothes that nature with feature and form, breathes into it the breath of life, and presents it to our view as living, speaking, acting,—concrete. Under both the economies of law and grace, the scriptures exhibit this nature before us in complete and varied development. We study the grand scheme of truths by which man is enlightened; we examine the complex apparatus of motives by which his affections are plied; we scrutinize the scale over which his practical duties are graduated:—and in all we see him a being of action and passion—of thought, of feeling, and of will. Is there no philosophy in this? And what finer scope is there for the speculative faculty than to analyze human actions, the compound results of thought and emotion—to detect the processes through which the mind is carried, from the first dawn of light upon it till the volition is consummated in the overt act? Indeed, it is conceded that a knowledge of the laws of mind is essential to the theologian. However useful the preacher may be, drawing from the stores of his own experience and proclaiming the practical precepts of Christianity, yet he can never take rank as a *divine*, without becoming to a large extent the *metaphysician*. Indeed, the cases are not rare in which a careful study of the scriptures alone has gradually imbued the mind with the profoundest truths of mental science.

What philosophy is more comprehensive than that of government and law? Yet the Bible reveals both upon the grandest scale, as God administers them over moral beings in heaven and upon earth. It reveals both, not only in the didactic exposition which we find in statutes and ordinances, especially as summed up in that comprehensive compend known as the decalogue; but illustrated and enforced by that diffuse commentary running through the whole of sacred history, the narratives and biographies of the inspired volume. We cease then to wonder that the fathers of a true speculative philosophy were not born before the Bible was drawn forth from its concealment. For while this blessed book was given to teach something far better than either philosophy or science; and while, as



Gaussen admirably remarks, no physical error can be found upon its pages, because its language is discreetly framed to adapt it to the growing discoveries of science, yet even the Bible cannot do its higher office of inculcating religion without at least insinuating philosophy. It places the concrete man in the full circle of his duties as an object of study; just as nature presents a concrete world in the midst of all its phenomena. The exposition of those moral laws by which the one is governed, and the interpretation of those physical laws by which the other is directed, constitute philosophy in its two great divisions, the philosophy of mind and the philosophy of nature.

*Gentlemen of the Eumenean and  
Philanthropic Societies :*

It is not without a purpose I have addressed this subject to you. There is a moral in the call which you annually make upon some one at this literary festival, to pour forth an utterance from the great throbbing heart of this busy world. Young Athletes standing in the Palæstra, just ready to spring forth upon the Olympic race of life, we bring to you a report of the dusty stadium. It is not an occasion to amuse you with the mere elegancies of unmeaning speech, which, like the brilliant hues of the bubble, leave not a trace of their evanescent splendor.—The voice which comes booming to your ears from the storm and battle of life, must utter earnest words, and speak to the yearning sympathies of young and expectant hearts. In these groves of Academus, you have been taught philosophy and religion: to-day you have listened to a discourse which celebrates their espousals. Let not a thought of their divorce enter your minds, to the dishonor of either. There never could have been a Bacon without the Bible. The world travailed long and anxiously, giving birth to many philosophers; but Francis Bacon was the offspring of the Reformation, doing that for philosophy which Luther had before done for religion. The one brought out the Bible and read it aloud to the nations: the other brought out the older volume of Nature and interpreted its cypher to mankind.

There is little danger, perhaps, that you will be captivated by the vulgar infidelity of Paine, or by the cold

skepticism of Hume, or by the ribald scoffing and profane wit of the French Encyclopedists. These have had their day, and it will be in another cycle when such baleful comets shall burst with lurid glare upon the world. But error will never cease its struggles to usurp the throne and to sit in the temple of truth until "the Lord shall consume it by the brightness of his coming." The dapper infidelity of our day sits, with a spruce and jaunty air, in the halls of science and in the chairs of philosophy. Too bland and nice ever to distort its features with a sneer, a smile of vanity ever lurking upon its lips, it simply handles its fossils and ignores the Bible. Putting on its wise spectacles, it reads off, from Egyptian monuments and Chinese records, the world's chronology in millions and billions of years, just as calmly as though God had never written a book, in which was set down the age of man. Or, shutting up its eyes in grave abstraction, it talks of its logical and intuitional consciousness, and solemnly denies the possibility of an objective revelation of spiritual truths. Would Bacon have done so? While constructing a science from disjointed and scattered materials, would not this mighty Demiurgus put forth his lens to collect every ray of light shooting athwart the chaos in which he moved? And would he have excluded any verse of scripture, because forsooth this was meant to teach religion and not science. No! the very genius of the inductive philosophy forbids the exclusion of a single pertinent fact from its generalizations, from whatever quarter the fact may come. The philosophy, therefore, which will ignore the Bible, and cancel its testimony, is not only baptized into the spirit of infidelity, but has apostatized from the fundamental articles of the Baconian creed. The union of these two depends upon affinities which cannot be destroyed. If, then, science proclaims a theory seemingly at variance with scripture, the alternative is plainly this: Either the interpretation of scripture is wrong, or else science has made a blunder. If the former, as we have no *a priori* scheme of interpretation, we are willing to correct our errors by any light which can be turned upon the sacred volume. If the latter, we wait till science shall gather other facts and make a truer induction. By the one or the other method, the two must eventually harmonize in their teachings. But

when the theologian employs the facts of science in aiding his interpretations of scripture, he manifests a confidence in the inductive principle, and puts to shame the philosopher who refuses to employ the facts of scripture in generalizing the conclusions of science.

It is with an earnest purpose I labour to establish the harmony of scripture and science. For if they are made antagonists, and science build up its glory upon the ruins of revelation, the issue joined is most appalling. There is no system, either of philosophy or science, which rests upon such various and satisfactory evidence as the Bible. There is no system which has stood for ages as the Bible has done, impregnable against the most furious and persevering assaults. If, then, you shake my faith in it, you destroy belief in every thing. If science turns upon me her discoveries, sweeping away in their ruthless current that system which met all the wants of my nature, and which I had supposed to rest upon immovable foundations, upon what that is firmer and better attested can my faith fall back? I dare not trust to the sequences of mathematical reasoning, for I know not but the next moment their evidence shall be destroyed, and all the links of demonstration fall apart, or else the entire chain be unbolted from the conclusion to which it was riveted. I dare not trust myself to metaphysical researches; for lo! the magician has been there, and jumbled together in inextricable confusion all the experiences of my consciousness. I cannot trust the evidence of sense so far as to believe in an objective world, lest some one arise to destroy this illusion, and all the beautiful things in nature disappear like the phantoms of a dream. I cannot even receive the philosophical theories which this fatal science would substitute for the faith it destroys; lest while I am gazing upon the magnificent creations, they too sink out of sight, like the deceitful mirage which mocks the pursuing traveller. Destroy my faith in the scriptures of God, resting upon higher and broader evidence than every thing else, and you launch me upon a sea of doubt which has neither bottom or shore. Steering by no chart, guided by no compass, wafted by no breezes, without observation of the stars or sounding of the deep, with no haven in prospect, without cargo to lose or save, with eyes, but nothing to see, and ears, but noth-



ing to hear, without aim and without heart, I drift a wandering wreck, in hopeless Pyrrhonism, till death's vortex swallow me in eternal night. From such a doom reason shrinks back aghast. Give me the fate of Prometheus, bound upon the Caucasian rock, a living prey to the vulture; let me, with Sisyphus, roll with weary labour the restless stone; or, like Tantalus, feed the hungry eye upon untasted viands, while gliding waters mock the thirsty lips; but, oh, give me not over to the doom of cherishing forever the instinct of faith, with nothing to believe; nourishing powers of reason, with nothing to demonstrate; conscious of an understanding, with nothing to know; and feeling the movements of passion, with nothing to love or to hate.

Such are the appalling consequences of this momentous issue to all who have once been persuaded of the inspiration of the scriptures. Those, indeed, who are content to abide in the solitudes and mists of a dreary deism, may experience no such shock. But all who have gone round about the Bible as the citadel of revealed truth, and have "marked her bulwarks" and "counted her towers," will have nothing left for hope or faith, when philosophy has put this in siege, and science has razed it to the ground. The harmony of science with revelation might be shown in detail, by a particular comparison of the established truths of both. But such a line of proof requires a minuteness of learning which few, outside the Professor's chair, may expect to command. This discourse gives, in two words—Baconianism and the Bible—a portable argument paralyzing the skeptic with the shock of the torpedo. The Baconian philosophy is the mother of that proud science which sheds such glory upon the age in which we live; and this philosophy, as already shown, has historical and logical connexions with the Bible, the charter of our religious hopes. We may rest, therefore, in the conviction that as the Bible has conferred the largest benefits upon philosophy, true science will yet repay it with the largest gratitude. Kindling her torch at every light between a glowworm and a star, she will read to us "the silent poem of creation." She will appear, like an ancient priestess, in the sacred temple of religion; and burn the frankincense of all her discoveries upon the altar of inspired truth. She

will assemble the elements and powers of Nature in one mighty orchestra, and revelation shall give the key-note of praise, while heaven and earth join in the rehearsal of the grand oratorio.

“God! let the torrents, like a shout of nations,  
Answer: and let the ice-plains echo, God!  
God! sing ye meadow streams, with gladsome voice;  
Ye pine groves, with your soft and soul-like sounds!  
And they too have a voice, yon piles of snow,  
And in their perilous fall shall thunder, God!  
Ye dreadless flowers, that skirt the eternal frost!  
Ye wild goats, bounding by the eagle’s nest!  
Ye eagles, playmates of the mountain storm!  
Ye lightnings, the dread arrows of the clouds!  
Ye signs and wonders of the elements!  
Utter forth God, and fill the hills with praise.  
———Tell ye the rising sun,  
And tell the silent sky, and tell the stars,  
Earth with her thousand voices praises God.”



